

New Balance Athletic Shoe, Inc.  
Somerset County  
Norridgewock, Maine  
A-645-71-E-R

**Departmental  
Findings of Fact and Order  
Air Emission License**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

**A. Introduction**

New Balance Athletic Shoe, Inc. (New Balance) located in Norridgewock, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their shoe manufacturing facility.

**B. Emission Equipment**

The following equipment is addressed in this air emission license:

**Fuel Burning Equipment**

<b><u>Equipment</u></b>	<b><u>Maximum Capacity (MMBtu/hr)</u></b>	<b><u>Maximum Firing Rate (gal/hr)</u></b>	<b><u>Fuel Type, % sulfur</u></b>	<b><u>Stack #</u></b>
Boiler #1	4.2	30.0	#2 fuel oil, 0.5%	1
Boiler #2	5.0	35.7	#2 fuel oil, 0.5%	1

**Process Equipment**

<b><u>Equipment</u></b>	<b><u>Pollution Control Equipment</u></b>
Various shoe manufacturing activities	none

C. Application Classification

The application for New Balance does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only and has been processed through Chapter 115 of the Department's regulations.

## II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department's regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Process Description

New Balance manufactures athletic shoes. The product cycle consists of several process areas, each with a specific function. A process area contains numerous workstations where workers perform specific tasks. Forty percent of the shoe uppers are domestic and are manufactured at the facility. The shoe upper material is received in bulk quantity and is cut and sewn together at numerous sewing and assembly stations. These activities do not contribute to the overall VOC emissions from the facility. The remaining 60% of the uppers (source uppers) are completely assembled prior to shipment to the factory.

In the past, New Balance prepared the shoe soles in-house. However, most of the soles now arrive primed, cleaned, and ready for cementing. This change has enabled the company to downsize their sole department and reduce adhesive and solvents at the facility, thereby significantly reducing VOC emissions. Preparation of the soles involves grinding (buffing) and cleaning to prepare them. Cleaning of the soles is performed using rubber erasers.

After cleaning, the soles are transferred to the priming area where they are treated with primer and left to dry. They are then taken to the cementing area, where a solvent-based cement is applied to the upper portion of the sole. The cemented soles are set aside and allowed to cure. Workstations in both the priming area and the cementing area contain exhaust hood systems to partially capture and exhaust VOC emissions to the atmosphere.

The final step of the process is Assembly. Assembly receives uppers, soles, lasts, and other components from Upper Prep, then forms and fits the components together to finish the shoe.

The upper is heated by a "Conditioner" so that it will form to the last and bond to shoe components. The upper also becomes more flexible making it easier to work with. Uppers from the Conditioner are placed on the last. The toes are formed and glued to the bottom material. The sides are then formed and also glued to the bottom material. Excess glue and bunched material is removed from the upper so it will seat correctly on the sole. The material to be cemented is scuffed for a better bond to the sole.

Adhesive is applied to the upper and allowed to dry. The uppers are then heated to activate the adhesive. The soles and uppers are then aligned and pressed together. Finally, any touch-up repairs are made before the shoes are inspected and packed.

New Balance continues to look for new products that can reduce or eliminate the use of solvents in the shoe manufacturing process.

**C. Boilers #1 and #2**

New Balance operates Boilers #1 and #2 primarily for facility hot water and heating needs.

Boilers #1 and #2 each have a maximum heat input of less than 10 MMBtu/hr and are therefore not subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BPT analysis for Boiler #1 (4.2 MMBtu/hr) and Boiler #2 (5.0 MMBtu/hr) is the following:

1. The total fuel use for Boilers #1 and #2 combined shall not exceed 150,000 gal/year of #2 fuel oil based on a 12 month rolling total.
2. The SO<sub>2</sub> emission limits are based on the firing of fuel which meets the criteria in ASTM D396 for #2 fuel oil.

3. Chapter 103 regulates PM emission limits. The PM<sub>10</sub> limits are derived from the PM limits.
4. NO<sub>x</sub> emission limits are based on data from similar #2 fired boilers of this size and age.
5. CO and VOC emission limits are based upon AP-42 data dated 9/98.
6. Visible emissions from the combined stack for Boilers #1 and #2 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block average in a continuous 3-hour period.

**D. VOC Emissions**

The majority of emissions from the facility are generated through the use of solvent-based cements. The use of solvent-based cements requires the utilization of solvent-based cleaners to remove cement residues.

Several solvent-based workstations have been replaced with a hot melt technology which employs the use of low-VOC, non-solvent based materials. This has reduced VOC emissions from the facility and emissions will be reduced further in the future as New Balance continues to replace solvent-based stations with hot melt stations.

To document emissions from the facility, New Balance will continue to maintain a recordkeeping program. This program consists of monitoring material usage, a monthly inventory of materials purchased and in-house quantities, and the determination of VOC emissions on a monthly basis.

The recordkeeping program consists of a solvent-based material inventory to document the quantity of solvent at the facility. MSDS data is used to quantify the VOC content of each material. All purchases of solvent-based materials are recorded. At the end of each successive month, another inventory is performed. Total VOC usage for each month is then determined from the net gain/loss of solvent in inventory plus the quantity of solvent purchased during the month. Off-site disposal of solvent-containing waste may be quantified and subtracted from the total solvent usage.

The implemented work practice standards and materials substitution research represents BPT for VOC emissions from New Balance. New Balance will practice good housekeeping procedures, such as keeping container lids closed and cleaning accidental spills immediately, to minimize VOC emissions. New Balance shall continue to seek process modifications which reduce VOC emissions.

Total facility VOC emissions from New Balance shall not exceed 24.9 tpy on a 12-month rolling total.

G. Annual Emissions

New Balance shall be restricted to the following annual emissions, based on a 12 month rolling total:

**Total Licensed Annual Emission for the Facility**  
**Tons/year**  
(used to calculate the annual license fee)

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>	<b>Total HAP</b>
Boilers	1.3	1.3	5.3	4.2	0.4	--	--
Facility Wide Emissions	--	--	--	--	--	24.9	9.0
<b>Total TPY</b>	<b>1.3</b>	<b>1.3</b>	<b>5.3</b>	<b>4.2</b>	<b>0.4</b>	<b>24.9</b>	<b>9.0</b>

### III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

<u><b>Pollutant</b></u>	<u><b>Tons/Year</b></u>
PM	25
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	100
CO	250

Based on the above total facility emissions, New Balance is below the emissions level required for modeling and monitoring.

### ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-645-71-E-R subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

### STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions. [38 M.R.S.A. §347(C)]
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]

- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to 38 M.R.S.A. §353. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
  - A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - 2. pursuant to any other requirement of this license to perform stack testing.
  - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. submit a written report to the Department within thirty (30) days from date of test completion.[06-096 CMR 115]

- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- [06-096 CMR 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]



**SPECIFIC CONDITIONS**

**(16) Boilers #1 and #2**

A. Total fuel use for Boilers #1 and #2 shall not exceed 150,000 gal/yr of #2 fuel oil which complies with ASTM D396. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of fuel delivered. Records of annual fuel use shall be kept on a 12- month rolling total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1	PM	0.12	06-096 CMR 103(2)(B)(1)(a)
Boiler #2	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.50	0.50	2.12	1.68	0.15	0.01
Boiler #2	0.60	0.60	2.52	2.00	0.18	0.01

D. Visible emissions from the combined stack for Boilers #1 and #2 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 115, BPT]

**(17) VOC Limits**

A. Total VOC emissions from the New Balance facility shall not exceed 24.9 tons per year on a 12-month rolling total basis. [06-096 CMR 115, BPT]

B. Combined emissions of HAPs as listed in section 112(b) of the Clean Air Act shall not exceed 9.0 tons/year on a 12-month rolling total basis, documented by the recordkeeping procedure outlined above for VOC. [06-096 CMR 115, BPT]

(18) New Balance shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard. [38 M.R.S.A. §605]

(19) **Annual Emission Statement**

In accordance with 06-096 CMR 137 (Chapter 137), the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

- 1) A computer program and accompanying instructions supplied by the Department;  
or
- 2) A written emission statement containing the information required in 06-096 CMR 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator  
Maine DEP  
Bureau of Air Quality  
17 State House Station  
Augusta, ME 04333-0017

Phone: (207) 287-2437

The emission statement must be submitted by July 1 or as otherwise specified in 06-096 CMR 137.

(20) **Air Toxics Emission Statement**

If New Balance exceeds the thresholds for HAPs listed in Appendix A of 06-096 CMR 137 in an inventory year in accordance with 06-096 CMR 137, the licensee shall report, no later than July 1 every three years (2005, 2008, 2011, etc.) or as otherwise stated in 06-096 CMR 137, the information necessary to accurately update the State's toxic air pollutants emission inventory in a format prescribed by the Department containing the information required in 06-096 CMR 137.

Reports and questions should be directed to:

Attn: HAP Inventory Coordinator  
Maine DEP  
Bureau of Air Quality  
17 State House Station  
Augusta, ME 04333-0017

Phone: (207) 287-2437

[06-096 CMR 137]

**(21) Payment of Annual License Fee**

New Balance shall pay the annual air emission license fee within 30 days of April 30<sup>th</sup> of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, §§ 3.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAVID P. LITTELL, COMMISSIONER

**The term of this license shall be five (5) years from the signature date above.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 5/7/07

Date of application acceptance: 5/8/07

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Lynn Ross, Bureau of Air Quality.